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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/514,526	02/28/2000	Donald S. Farquhar	END000006US1	8922
5409	7590	12/30/2003	EXAMINER	
ARLEN L. OLSEN SCHMEISER, OLSEN & WATTS 3 LEAR JET LANE SUITE 201 LATHAM, NY 12110			WINTER, GENTLE E	
		ART UNIT		PAPER NUMBER
		1746		20
DATE MAILED: 12/30/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/514,526	FARQUHAR ET AL.	
	Examiner	Art Unit	
	Gentle E. Winter	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 October 2003.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 19-22 and 26-42 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 19-22 and 26-42 is/are rejected.
- 7) Claim(s) 20,21,26,29,34,36,38-40 and 42 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) Interview Summary (PTO-413) Paper No(s). _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 26, 31, and 41, as amended, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, it is unclear what is being claimed when referencing an “electrical structure”.
2. More specifically, the claims disclose “an electrical structure” wherein an “acid solution is in contact with both the iron comprising body and the chromium volume within the opening.”

Claim Rejection Warning - 35 USC § 112

3. Claim 41 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: If the acid were to be accepted to be a structure, which it is not, the claims would be rejected as failing to disclose how the acid interacts with the structural components of the claim(s).

Claim Objections

1. Claim 26 is objected to because of the following informalities: A minor typographical error appears to exist: the expression “solution solution” modifies acid. If appropriate, correction is required.
2. Claims 20, 21, 29, 34, 36, 38-40, and 42 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. As has been discussed throughout the prosecution patentable weight will not be accorded to the method when the invention claims an apparatus. Applicant may elect to pursue an application claiming the invention in kit form or claim the invention as a method. Concentrations and temperatures are better-suited method types claims. Etch rates are usually meaningful only to the extent that there is an associated process step that results in the claimed etch rate. The claims are rejected with their base claims.

Response to Arguments

With respect to the pending 35 U.S.C. § 112 rejection applicant argued that applicant had amended claim to so as to claim the acid solution as a structural element and not a method step. The argument is not persuasive. The acid is not part of the structure. The acid reacts with the metal and is consumed. The acid will not be accorded status as structure in this application. Applicant is advised to differentiate the claims on other grounds or appeal the claims that rely on the acid for novelty. This examiner will not issue these apparatus claims when the point of

novelty resides in the nature of the etchant. Applicant may well have a patentable method, but the apparatus is not believed to be patentable and in any case is not patentable based on the type or presence of an etchant. Applicant cited caselaw purporting to support applicant's arguments. The caselaw is simply not applicable. Applicant does not purport to be claiming a kit.

There is no 35 U.S.C. § 101 rejection pending and as such the arguments addressing the possibility of such a rejection will be addressed when and if such a rejection should be made. This examiner was trying to compel applicant to identify what statutory class contemplated an apparatus with a reacting acid and considered the acid to be structural. A patent may be had for an acid composition, but this examiner is not aware of any statutory authority which would allow for the issuance of a patent which by virtue of the method of which a composition is used, whether or not explicitly claimed as such, would be accorded apparatus status. Additionally, it now appears that applicant is attempting to argue that the claims are drawn to a kit. If this were the case, the kit would have to disclose the various components and identify the claim as such. The MPEP at 2115 and relevant caselaw is replete with teachings disclosing that expressions relating an apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, “[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims.” *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). In *In re Young*, a claim to a machine for making concrete beams included a limitation to the concrete reinforced members made by the machine as well as the structural elements of the

machine itself. The court held that the inclusion of the article formed within the body of the claim did not, without more, make the claim patentable. It is noted that the MPEP 2115 notes that the above discussed line of cases is limited to claims directed to machinery which works upon an article or material in its intended use. It does not apply to product claims or kit claims (i.e., claims directed to a plurality of articles grouped together as a kit).

If applicant is trying to claim a kit invention, claims drawn to a kit would have to be presented. Currently an "electrical structure" is claimed. This emphatically is not a kit.

Applicants have requested caselaw supporting this examiner's position, and requested accompanying legal analysis. This examiner has largely confined the discussion to the provisions of the MPEP especially section 2115, which appear to squarely address the issue. The Board of Appeals and Interferences is the appropriate venue for exploring subtle, and often esoteric, matters of how caselaw is best applied to the facts of a particular case. The above cited caselaw and analysis is more than sufficient for the purposes of addressing the issues related to patentability that are at issue in the instant case. Applicant's contention that a method of applying an etchant would support a patent for an apparatus, which is the snapshot in time, of the etching process is simply without support. If the acid is to be given weight the claims must either be drawn to a method, or to a kit, or be patentable without the point of novelty residing in the presence of an etchant. If applicant has anything that suggests something to the contrary, the matter may be revisited in continued prosecution. The presence of the etchant will not be

accorded status as a structural component. Arguments to the contrary should be in the form of a proper Appeal Brief and directed to the Board of Patent Appeals and Interferences.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 26, 27, 19-22, 28, 29 31-36 38-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 4,350,564 to Wei and Geshner. Claims 26, 31 and 42 are drawn to an electrical structure, comprising a chromium volume, including a layer of chromium; an iron comprising body; an acid solution; and a layer of conductive metal on the layer of chromium, wherein the conductive metal includes an opening extending through its thickness, and a portion of the iron containing body is within the opening, and a portion of the iron comprising body is in electrical contact with the chromium volume and a portion of the acid solution is within the opening and the portion of the acid solution is in contact with both the portion of the iron containing body and the chromium volume. With specific respect to claims disclosing an electrical structure comprising: a chromium volume, and a layer of conductive material, wherein the chromium volume includes a layer of chromium, wherein the layer of conductive metal is on the layer of chromium, wherein the conductive metal includes an opening extending through its thickness. Wherein the opening exposes the layer of chromium. The same is identically disclosed in figure 4E of Wei and associated relevant text. It is noted that it is

unclear whether the iron comprising body is part of the structure or is drawn to a future intended use. The specification suggests that the iron containing body is a probe (see element 22 of the instant invention) if the iron is a mere probe than it is not properly part of the structure. Exactly what weight should be accorded the probe is unclear. However, in the interests of being rigorous, Geshner discloses a probe and explicitly provides the motivation for making the instant combination. Specifically, Geshner discloses: "the probe is brought into contact with the undesired areas 16, it has been found that a reaction will be initiated which will cause only the undesired areas 16 to be completely etched away." The artisan would have made to combination for improved etch selectivity.

3. Claims reciting that there is a chromium oxide layer on the chromium layer. Initially, it is noted that the chromium layer would inherently form an oxide layer upon exposure to the air. Nonetheless, Geshner discloses that chromium and chromium oxide are interchangeable. Column 2, line 39 *et seq.* As to claims that recite acid, concentration, etch rates and temperatures, as discussed above, the acid, regardless of the form, is not considered to be part of the structure, however it is disclosed in both Wei (*inter alia* abstract) and Geshner (*inter alia* Table I).

4. As to the limitation that the iron-comprising body includes steel, it would have been obvious to etch the chromium volume by contacting the chromium volume with an iron comprising body that is steel because Geshner teaches an iron-comprising body and one of ordinary skill in the art would have arrived at the same expected results. Steel is predominately iron and iron is therefore subsumed with the definition of steel. If applicant wants to indicate the

type of steel (stainless, carbon, etc) then the recitation can be given additional consideration.

Geshner teaches iron.

5. Claims 30 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wei and Geshner as discussed above and United States Patent No. 5,149,404 to Blonder.

6. The combination of Wei and Geshner does not explicitly disclose a fluoropolymer dielectric volume bonded to the chromium volume. However, Blonder discloses wherein a photoresist volume is bonded to the chromium volume (column 1, lines 20-38).

4. It would have been obvious to one of ordinary skill in the art at the time the invention was made to bond a fluoropolymer dielectric volume to the chromium volume because fluoropolymer dielectric materials are conventionally used as photoresist masks in the etching of metallic films and the integrated electrical circuit fabrication industry and Blonder teaches that reticle masks made of chromium are ordinarily patterned by a radiation photoresist (column 1, lines 20-38). The use of conventional materials to perform their known functions in a conventional process is obvious. *In re Rener* 134 USPQ 343 (CCPA 1962).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

6. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. It is noted that applicant has engaged in a pattern of substantively changing the claims, such as deleting "apparatus" in favor of "electrical structure" and removing the argued point of novelty i.e. "conveyerized processing apparatus". In the event Applicant elects to continue prosecution, Applicant is strongly cautioned to exercise care in future making future amendments, continuity of claims is essential if patentable subject matter is to be identified. At this point this Examiner believes that the issue is fairly clear "what status should 'acid' be accorded in the pending claims."

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gentle E. Winter whose telephone number is (703) 305-3403. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Gentle E. Winter
Examiner
Art Unit 1746

December 22, 2003

Zeinab El-Arini

ZEINAB EL-ARINI
PRIMARY EXAMINER